

IN THE SPECIFICATION:

Paragraph [0038], please replace with the following:

[0038] Fig. 2 gives a schematic view for illustrating an outline of a configuration of the measuring apparatus 40 of the invention. In this embodiment, only one limiting current type oxygen sensor is provided, and this oxygen sensor 10 serves as both a blank sensor and a measure sensor. More specifically, when the limiting current type oxygen sensor serves as a blank sensor, the oxygen concentration of the deoxidation measuring gas obtained by passing the measurement gas through the oxygen ~~remover~~~~remove~~ 41 would be measured with pump current of the limiting current type sensor, and when the limiting current type oxygen sensor is used as a measure sensor, the oxygen concentration of the measurement gas would be measured with pump current of the limiting current type sensor. Calculation of the oxygen concentration is accomplished by using a mechanism ~~which~~ ~~calculate~~ that calculates the difference in pump current between the measure sensor and the blank sensor as the concentration of oxygen contained in the measurement gas, as described later. Fig. 3 is a block diagram of major components of the measuring unit 40 shown in Fig. 2.

Paragraph [0052], please replace with the following:

[0052] In the trace oxygen measuring apparatus, the device for generating oxygen 42 may comprise a solid electrolyte and a pair of metal electrodes. ~~It~~ The device may have an oxygen pump cell 14 comprising an oxygen feed duct 12A comprising an air duct which is a vacancy defined by the solid electrolyte, and an oxygen feed electrode 15 formed on the surface of the solid electrolyte in the air duct, an oxygen discharge electrode 16 provided on the surface of the solid electrolyte exposed to the gas, and an oxygen feed electrode 15 formed in the air duct 12A. A constant current source/controller 7571 may be arranged so that prescribed current flows between the oxygen discharge electrode 16 and the oxygen feed electrode 15.

Paragraph [0078], please replace with the following:

[0078] Fig. 9 is a schematic view illustrating the basic structure of the device for generating a traceraee oxygen 42 of the second aspect of the invention. In this example, while the solid electrolyte layer 4a having the oxygen discharge electrode 7 provided thereon and one end are located at the same position,

a solid electrolyte layer 4b smaller than the layer 4a by a distance corresponding to the length of the first vacancy, and a first vacancy defined by the solid electrolyte layer 4c having the same length as the layer 4a are formed. The solid electrolyte layer 4b regulating the opening height of the air duct having the oxygen feed electrode 6 provided is formed by a single solid electrolyte layer. By composing this solid electrolyte layer 4b with a plurality of layers, it is possible to increase the oxygen diffusing quantity of the oxygen feed duct, and increase the constant current allowance for generating oxygen. Particularly, when achieving a high oxygen concentration from a high gas flow rate, the solid electrolyte layer 4b can be composed of a plurality of layers. It was sufficiently possible, in an example of a thick-film ZrO₂ porcelain, to build a 10 mA/eight layers (oxygen generation: about 38 ml/min) by using a tape of about 200 mm/layer.